

Some synonyms chiefly among Indian Thysanoptera

BY

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(With a plate)

Based upon a critical study of several genera and species the present article suggests changes in the nomenclature of some Thripidae, mostly Indian. Exotic taxa having a direct bearing on a study of the Indian genera and species taken up here have naturally come under the scope of this paper. I have suggested 4 genera, 1 subgenus and 3 species to be relegated to synonymy, in addition to several new combinations.

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Genus *Rhipiphorothrips* Morgan

Rhipiphorothrips cruentatus Hood

1919, *Rhipiphorothrips cruentatus* Hood, *Insec. Inscit. Menstr.* 7 : 94-96.

1928, *Rhipiphorothrips karna* Ayyar, *Ent. Mem. Dept. Agr. India* 10 : 252-253, fig. 16.

Among a long series of *R. cruentatus* from Hoshiarpur collected on Rose leaves, Mar.-Apr. 1960, (they were clustered on the lower side and had seriously blotched the leaves), some of the specimens which were greatly pressed by coverslip pressure, show distinct pronotal 'expansions' exactly as figured and described by Ayyar for his *karna*. This character being the result of an artificial distortion, and upon which the species was based, *karna* should be relegated as a synonym of *cruentatus*. Unfortunately I did not have access to any specimen of the type or other series

identified as *karna* by Ayyar. No such specimen is present in the collections of Dr. T. N. Ananthakrishnan. But there is reason to believe that *karna* was erected upon distorted specimen of *cruentatus*. Probably Ayyar had himself recognised this, since *karna* was not included in the Catalogue (1940) by Ayyar & Margabandhu. No reasons were cited for the omission by these authors or later by Shumsher (1946).

Genus *Pseudodendrothrips* Schmutz

- 1913, *Pseudodendrothrips* Schmutz, *Sitz. Ber. Akad. Wiss. Wien* 122 : 998-999. Type *P. ornatissimus* Schmutz.
 1930, *Graphidothrips* Moulton, *Rev. Chil. Hist. nat.* 34 : 272. Type *G. stuardoi* Moulton.
 1936, *Halmathrips* Hood, *Rev. de Ent.* (Rio de Jan.) 6 : 248-249. Type *H. citricinctus* Hood.
 1953, *Halmathrips* subgenus *Phaosothisrips* Stannard, *Proc. ent. Soc. Wash.* 55 : 5. Type *H. (P.) beckeri* Stannard.

Stannard (1953, *Proc. ent. Soc. Wash.* 55 : 1-6) redescribed *Halmathrips*, but overlooked *Pseudodendrothrips* while defining its affinities. After comparing Stannard's account of *Halmathrips* with at least three species of *Pseudodendrothrips* studied by me, I believe that *Halmathrips* should be relegated as a synonym. I have also seen specimens reported by the late Dr. T. V. R. Ayyar as *Pseudodendrothrips ornatissimus* from Burma (1934, *Rec. Indian Mus.* 36 : 493). The length of hind tarsus v. hind tibia in *Halmathrips* (*vide* Stannard), and in *Pseudodendrothrips* examined by me has relatively the same proportion. Whether or not *Phaosothisrips* should be maintained under *Pseudodendrothrips* is a problem that can be solved only after the various known species are thoroughly revised.

Graphidothrips Moulton appears to be another synonym of *Pseudodendrothrips*, notwithstanding the differences mentioned by Stannard.

The existing keys do not provide sufficient good characters for separating the Indian genera of the tribe Dendrothripini. The following key it is hoped will be useful to students of this group :

- 1 (2) Prosternal transverse sclerotisation entire (Figs. 1, 2). Maxillary palpi 3-segmented. Forewing thripine, with both margins curving to meet at the tip. Fore-and mid tarsi 2-segmented. Males with gland areas on abdominal sterna. *Asprothrips*
- 2 (1) Prosternal transverse sclerotisation divided (Figs. 3, 4). Maxillary palpi 2-segmented. Forewings variable. All tarsi 1-segmented. Males without gland areas.
- 3 (4) Pronotum with a transverse apodeme (complete or incomplete) in about the middle. Forewings thripine in shape. Eyes strongly bulged. Terminal antennal segments greatly elongated. *Pseudodendrothrips*
- 4 (3) Pronotum without such apodeme. Forewings with fore-margin curving at tip to meet the straight hind margin. Eyes normal, not bulged. Terminal antennal segments not attenuated. *Dendrothrips*

Genus *Asprothrips* J. C. Crawford*Asprothrips indicus* (Bagnall) comb. nov.

1919, *Dendrothrips indicus* Bagnall, *Ann. Mag. nat. Hist.* (9) 4 : 261.

A study of cotype material (1 female, 1 male) from the British Museum and further specimens from Dr. T. N. Ananthakrishnan, shows that the species does not belong in *Dendrothrips*. A comparison with *Asprothrips antennatus* (Mlt.) (the type of *Asprothrips*), sent by Dr. Sakimura, bears out close similarities, which merit inclusion of both species in a single genus. *Asprothrips indicus* will be fully redescribed elsewhere, but a key to distinguish *A. indicus* from *A. antennatus* is given below. A new species of *Asprothrips* from Mussoorie being described elsewhere has dark dendrothripine forewings and dark brown body.

Body colour dark brown. Wings banded. Reticulations on abdominal terga close, wrinkles along ridges very prominent. (south India)... *indicus*

Body pale yellow. Wings hyaline throughout. Reticulations (clearly visible only in specimens treated in KOH) on abdominal terga rather widely spaced, wrinkles scarcely visible. (U.S.A.). .. *antennatus*

Genus *Dendrothrips* Uzel

1895, *Dendrothrips* Uzel, *Mon. Ord. Thys.*, p. 159. Type *D. ornatus* (Jabl.).

1961, *Cerothrips* Ananthakrishnan, *Zool. Anz.* 167 : 259.

Type *C. minutus* Anan.

The type series of *Cerothrips minutus* was studied. The species does not show any characters antagonistic to the present concept of the genus *Dendrothrips*, such as, the anteriorly distinctly excavated head, the dendrothripine shape of antennae, the divided prosternal sclerotisation, the metasternal furcal arms produced into a distinct lyra, the typically 2-segmented maxillary palpi (in *C. minutus*, 2-segmented and not 3-segmented as originally reported), the distinctly dendrothripine forewings, the fore marginal fringes of forewing arising much behind the costal margin, and the characteristic chaetotaxy of abdomen.

A female of *Dendrothrips ornatus* was received from the British Museum for this study.

Dendrothrips minutus (Ananthakrishnan) comb. nov.

1961, *Cerothrips minutus* Ananthakrishnan, *Zool. Anz.* 167 : 260-261, figs. 1a, A.

This species is a typical *Dendrothrips*, and by its pale coloration and 8-segmented antennae, can be readily separated from the known species of *Dendrothrips* from India. The sense cone on antennal segment 3

appears to be single, although curved, and not forked. The forewings bear 3 greyish 'spots', the first one touching neither the front nor the hind margin of the wing, and the other two only touching the costal border. The proximal of these lies beyond the basal fifth (a little beyond anal lobe), one in the middle, and the distal one in the distal third of the wing.

Of the yellow species of *Dendrothrips* with 8-segmented antennae, *minutus* has to be compared with *fasciatus* Faure (1960a) and *vitex* Faure (1960). Perhaps *minutus* is closest to *vitex*, but can be separated as follows: fore-wings with 3 greyish spots (as defined above) in *minutus*, totally transparent in *vitex*; antennal segment 6 more slender in *minutus* than in *vitex* (length: width measured by me on one female of *minutus*, 27: 11 μ ; in *vitex*, 21-23: 13 μ); antennal segment 6 much longer than style (7 and 8 together) in *minutus*, segment 6 and style subequal in *vitex* (measurements taken on one female of *minutus*, length of 6: length of style, 27: 19 μ ; in *vitex*, 21-23: 22 μ). From *fasciatus* our species is distinct as follows: no strong seta on posterior angles of pronotum in *minutus* (one rather long seta present in *fasciatus*); fore-wings transparent with only 3 greyish spots in *minutus*, in *fasciatus* 2 well defined cross bands present and the anal lobe shaded; antennal segment 6 shorter than 5 in *minutus* (measured on one female, length of 5: 6, 30: 27 μ), in *fasciatus* segment 6 slightly longer than 5 (length of 5: 6, 23: 25 μ).

New record: Madhya Pradesh, Jabalpur district, Gwarighat village, 1 female, on grass (a straggler perhaps!), 17 Oct. 1962, coll. J. S. Bhatti. Originally described from Uttar Pradesh, taken on *Vitex negundo*.

Genus *Dantabahuthrips* Shumsher

1942, *Anaphothrips* subgenus *Dantabahuthrips* Shumsher, *Indian J. Ent.* 4: 123-124. Type *A. (D.) sacchari* Shumsher.

1956, *Catina* Faure, *J. ent. Soc. S. Afr.* 19: 100-101. Type *C. papyri* Faure.

1962, *Neophysopus*, Bhatti, *Bull. Ent.*, no. 3: 46. In Part.

Dantabahuthrips is being raised to generic rank. It is readily distinguished from *Anaphothrips* (and its subgenus *Neophysopus*) by the absence of spinula on mesosternum, by having well developed medio-dorsal setae on female tergum 9 of abdomen, and only 2 thick spines in middle of male abdominal tergum 9 (4 in *Anaphothrips*). Having studied *D. sacchari* in detail and comparing it with the description of *Catina papyri*, I feel that *Catina* should be considered a synonym of *Dantabahuthrips*. But the two species remain distinct.

The genus may be characterised as follows: *Exothrips*-like, but without antennal dimorphism in the two sexes. Fore-tibial tooth absent in female, present or absent in male. Tergum 9 of male abdomen with two

small closely placed rather thick spines, tergum 10 in both sexes completely split longitudinally in the middle. Prosternal transverse sclerotisation entire and thinned in the middle. Spinula lacking both on meso- and metathoracic sterna. Metasternum medially at apex rather broadly rounded.

KEY TO THE KNOWN SPECIES OF *DANTABAHUTHRIPS*:

- 1 (2) Body colour whitish normally. Female without fore-tibial tooth, in male distinctly present. Female: antennal segments 1-5 and proximal fourth or a little more of 6 pale, rest of antenna dark grey; apex of abdominal segment 10 dark grey. Male: antenna wholly pale yellow, although a very faint greyish shade may be present on distal two-thirds of segment 6, and all of 7 and 8. (India). *sacchari*
- 2 (1) Body colour yellowish. Fore-tibial tooth absent in both sexes.
- 3 (4) Female: antennal segments 1-3 pale yellow, 4-8 dark greyish brown, 4 lighter in proximal three-fourths, 5 and 6 in proximal half; apex of abdominal segment 10 very dark brownish. Male: antenna wholly yellow. (south India: Madras). . . *sakimurai* (Ananthakrishnan 1961)
- 4 (3) Female: antennal segments 1-3 pale yellow, 4 and 5 pale grey (5 darker apically), 6-8 brownish grey; apex of abdomen not dark. Male: antenna wholly yellow. (Africa: Sudan, Uganda). *papyri*

***Dantabahuthrips sacchari* Shumsher**

1942, *Anaphothrips (Dantabahuthrips) sacchari* Shumsher, *Indian J. Ent.* 4: 125-127, figs.

Material of this species has come to hand from different parts of India, and it can now be stated definitely that the fore-tibial tooth said to be present in females by Shumsher, is absent in all females seen by me. Incidentally Hoshiarpur (Punjab), from where I have studied about a dozen specimens, is only c. 84 km. from Rupar, the type locality of the species. In male the process is present on both legs. The width of fore-femur measured on one female is 65 μ and on one male 62 μ .

The species is conspicuously whitish with no trace of yellow. But if specimens are allowed to remain in alcohol for long periods, the internal organs may assume a dirty light yellowish colour which is conspicuous through the transparent cuticle.

Exothrips tenellus Priesner 1950 needs to be compared carefully with *D. sacchari*, as that species based upon the female alone, may be identical with or at least very closely related to *sacchari*.

New records: New Delhi, 3 males on grass, 13 Apr. 1963, coll. J. S. Bhatti; Madhya Pradesh, Jabalpur District, Tewar village (west of Jabalpur), 1 female on grass, 22 Sept. 1963, coll. J. S. Bhatti.

Dantabahuthrips sakimurai (Ananthakrishnan) comb. nov.

1961, *Anaphothrips* (*Neophysopus*) *sakimurai* Ananthakrishnan, *Zool. Anz.* 167 : 261-263.

Type material of *sakimurai* was examined and found to be congeneric with *sacchari* Shumsher. The general colour of the body is yellowish, even in fresh specimens. The apex of abdominal segment 10 in female is very dark brown. The width of fore-femur measured on 2 females is 49-52 μ .

Dantabahuthrips papyri (Faure) comb. nov.

1956, *Catina papyri* Faure, *J. ent. Soc. S. Afr.* 19 : 101-105, figs. 1-5.

This interesting form has been described from Uganda and Sudan, and has been taken on papyrus. Apart from the differences noted in the key, the antennae in *papyri* are much stouter than in *sacchari* where they are rather slender. There are several other differences also in measurements. From its description it appears that the species is yellow, as compared to the whitish colour in *sacchari*. I have seen a paratype of *papyri* in the Ananthakrishnan collections.

Genus Ramaswamiahiella Karny

The chief characteristic upon which the genus is to be recognised as distinct from *Thrips*, is the presence of 6-7 pairs of setae on hind borders of abdominal sterna, as pointed out first by Priesner (1949, *Bull. Soc. Fouad Ent.* 33 : 61). To my knowledge few other thripids possess such numerous setae on posterior margins of abdominal sterna.

As recognised herein, only the type species, *subnudula* Karny, is included in the genus. *Ramaswamiahiella kallarensis* Ananthakrishnan (1960, *J. Bombay nat. Hist. Soc.* 57 : 564-565) is being transferred to *Thrips* by Dr. T. N. Ananthakrishnan (personal correspondence).

Ramaswamiahiella subnudula Karny

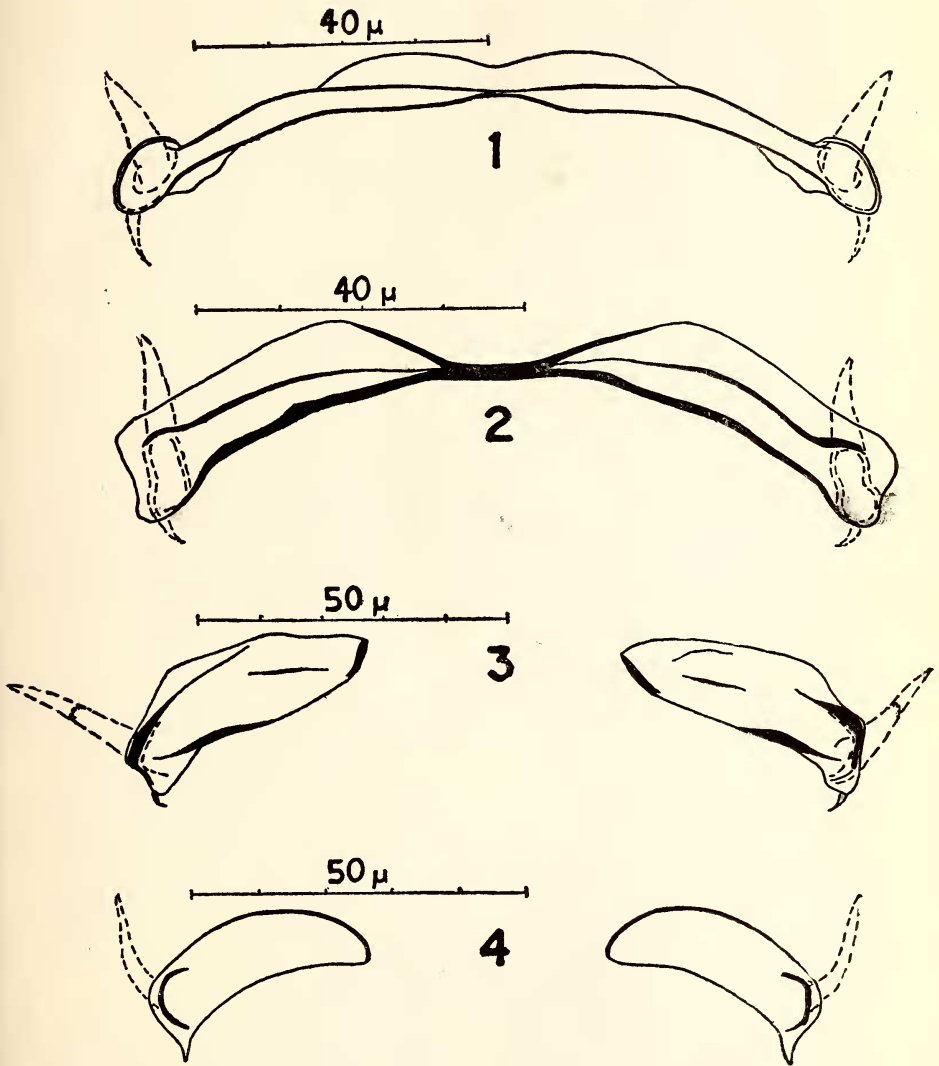
1926, *Ramaswamiahiella subnudula* Karny, *Ent. Mem. Dept. Agr. India* 9 : 208-210, fig. 11 (a-c).

1928, *Thrips pandu* Ayyar, *Ent. Mem. Dept. Agr. India* 10 : 264-265.

1929, *Thrips setosus* Moulton, *Rec. Indian Mus.* 31 : 97-98. (nec *setosus* Moulton 1928).

1951, *Thrips temporatus* Bailey, *Pan-Pacific Ent.* 21 : 9. (new name for *setosus* Moulton 1929).

The following material of this species was studied : (i) Numerous examples of both sexes in Rose flowers, New Delhi, Feb. 1962, coll.



Prosternal sclerotisation

Figs. 1. *Asprothrips antennatus* (Moulton), female; 2. *Asprothrips indicus* (Bagnall), female; 3. *Dendrothrips ornatus* (Jabl.), female; 4. *Pseudodendrothrips* sp., female.